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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,247	04/16/2004	Jae-Yong Park	049128-5145	7775
9629	7590	07/10/2006	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			SANEI, HANA ASMAT	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/825,247

**Applicant(s)**

PARK, JAE-YONG

**Examiner**

Hana A. Sanei

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

The Amendment, filed on 5/8/06, has been entered and acknowledged by the Examiner.

Claims 1-27 are pending in the instant application

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2,4-5,10-12, 16, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernkopf (US 6844673 B1) in view of Nishi et al (US 2001/0004190 A1).

With respect to Claims 1-2, 16, 21, Bernkopf teaches a first array substrate (100, see at least Figs. 4-6) having an anode electrode (104), a cathode (110) and an organic layer (108); a second array substrate (200) having at least one driving thin film transistor (213); a first spacer (conductive adhesive deposits, 212) made of conductive material that supplies the driving signal to the anode electrode; a second spacer (112, barrier

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layer) to fix together the first and the second array substrates (Col. 9, lines 60-63). It should be noted that Bernkopf's lamination of the top surface 120 to the opposing top surface 220 guarantees the purpose of the second spacer to be such that the second spacer "fix[es]" the first and the second array substrates.

Bernkopf lacks the second spacer being made of an adhesive material. In the same field of endeavor, Nishi teaches a spacer (sealing agent, 1005 see at least Fig. 11B) made of an adhesive material ([0160]) in order to ensure structural stability and prevention of external air ([0160]). It should be noted that Nishi's sealing agent, 1005, is a spacer in that it provides for a form of spacing between a first and second substrates. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the composition of the second spacer, as disclosed by Nishi, in the device of Bernkopf, in order to ensure structural stability and prevention of external air.

With respect to Claim 4, Bernkopf teaches a sealing member for combining the first array substrate and the second array substrate using a sealant (Col. 4, lines 44-46).

With respect to Claim 5, Bernkopf teaches the invention set forth above (see rejection in Claim 1 above). Bernkopf lacks the second spacer and the sealing member made up of the same identical material. In the same field of endeavor, Nishi teaches a spacer (sealing agent, one of 1005 see at least Fig. 11B) is made of a material identical to the material making up the sealing member sealing agent, (other of 1005) in order to ensure equally distributed structural stability of the device overall. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to

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modify the compositions, as disclosed by Nishi, in the device of Bernkopf in order to ensure equally distributed structural stability of the device overall.

With respect to Claim 10, the claim essentially recites the same limitation for the method of fabrication as the limitation in Claim 1 and hence is rejected over the same reasons stated in the rejection(s) of claim(s) 1.

With respect to Claims 11 & 18, the claim essentially recites the same limitation for the method of fabrication as the limitation in Claim 4 and hence is rejected over the same reasons stated in the rejection(s) of claim(s) 4.

With respect to Claims 12 & 19, the claim essentially recites the same limitation for the method of fabrication as the limitation in Claim 5 and hence is rejected over the same reasons stated in the rejection(s) of claim(s) 5.

With respect to Claim 20, Bernkopf teaches that the spacer (112, see at least Fig. 5) contacts the anode electrode (104). It should be noted that while Bernkopf's spacer does not *directly* contact the anode electrode, it nonetheless *contacts* the anode electrode via other interlayers.

2. Claims 3, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernkopf (US 6844673 B1) in view of Nishi et al (US 2001/0004190 A1) in further consideration of Fukunaga (US 6608449 B2).

With respect to Claims 3, 17, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 1 above). Bernkopf-Nishi is silent regarding the thickness of the second spacer. In the same field of endeavor, Fukunaga teaches a spacer is about 3-5 micrometers in height. It should be noted that a predetermined height would

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provide sufficient mechanical stability. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the thickness of a spacer, as disclosed by Fukunaga, in the device of Bernkopf-Nishi in order to ensure provide sufficient mechanical stability.

3. Claims 6-9 & 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernkopf (US 6844673 B1) in view of Nishi et al (US 2001/0004190 A1) in further view of Kawase (US 2005/0176242 A1).

With respect to Claims 6 & 13, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 1 above). Bernkopf-Nishi is silent regarding the specifics of the driving signal circuitry of the second array substrate. In the same field of endeavor, Kawase forming a gate line (scanning lines "gate," see at least Fig. 9); forming a data line (data line "sig" of Fig. 9) crossing the gate line; forming a supply line (supply line "com" of Fig. 9) in parallel with the data line ([0074]); forming a first thin film transistor (202) at an intersection of the gate line and the data line; and forming a second thin film transistor (203) connected to the supply line ("com") and the first thin film transistor (refer to Fig. 9) in order to ensure proper circuitry and function of device. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the specified circuitry, as disclosed by Kawase, in the device of Bernkopf-Nishi in order to ensure proper circuitry and function of device.

With respect to Claims 7 & 17, Bernkopf-Nishi teaches that the second spacer (112, barrier layer, see at least Figs. 4-6 of '673) is formed to overlap with the first thin film transistor (213, Fig. 6)

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With respect to Claims 8 & 15, Bernkopf-Nishi teaches that the second spacer (112, barrier layer) is formed to contact anode electrode (104). While Bernkopf-Nishi's second spacer is not in *direct* contact with the anode electrode, it is nonetheless in *contact* with the anode electrode.

With respect to Claim 9, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 6 above) and further teaches that the first spacer (conductive adhesive deposits, 212, of '673) is connected (electrically connected via the receptor sites, 203) to the second thin film transistor (213). Bernkopf-Nishi is silent regarding the drain electrode of a thin film transistor. In the same field of endeavor, Kawase teaches that a thin film transistor has a drain electrode ([0018]). It should be noted that Bernkopf-Nishi's first spacer is hence connected to a drain electrode of a thin film transistor for the purposes of ensuring proper circuitry and function of device. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to include a drain electrode, as disclosed by Kawase, in the device of Bernkopf-Nishi in order to ensure proper circuitry and function of device.

4. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernkopf (US 6844673 B1) in view of Nishi et al (US 2001/0004190 A1) in further view of Urabe et al (US 6614174 B1).

With respect to Claim 22, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 1 above). Bernkopf-Nishi fails to teach a barrier part defining an EL cell having the anode electrode, the cathode electrode, and the organic layer.

In the same field of endeavor, Urabe teaches an organic electroluminescent device (see Figs.1-3) with a barrier part (barrier plate, 6) defining an EL cell having the anode electrode (A), the cathode electrode (K), and the organic layer (10) in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate (Col. 1, lines 12-15 & Col. 3, lines 27-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the barrier part, as disclosed by Urabe, in the organic electroluminescent display device of Bernkopf-Nishi in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate.

With respect to Claim 23, Bernkopf-Nishi-Urabe teaches that the second spacer (112 of '673) contacts the barrier part (#6 of '174).

With respect to Claim 24, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 10 above). Bernkopf-Nishi fails to teach a barrier part defining an EL cell having the anode electrode, the cathode electrode, and the organic layer.

In the same field of endeavor, Urabe teaches an organic electroluminescent device (see Figs.1-3) with a barrier part (barrier plate, 6) defining an EL cell having the anode electrode (A), the cathode electrode (K), and the organic layer (10) in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate (Col. 1, lines 12-15 & Col. 3, lines 27-36).



Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the barrier part, as disclosed by Urabe, in the organic electroluminescent display device of Bernkopf-Nishi in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate.

With respect to Claim 25, Bernkopf-Nishi-Urabe teaches that the second spacer (112 of '673) contacts the barrier part (#6 of '174).

With respect to Claim 26, Bernkopf-Nishi teaches the invention set forth above (see rejection in Claim 16 above). Bernkopf-Nishi fails to teach a barrier part defining an EL cell having the anode electrode, the cathode electrode, and the organic layer.

In the same field of endeavor, Urabe teaches an organic electroluminescent device (see Figs.1-3) with a barrier part (barrier plate, 6) defining an EL cell having the anode electrode (A), the cathode electrode (K), and the organic layer (10) in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate (Col. 1, lines 12-15 & Col. 3, lines 27-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the barrier part, as disclosed by Urabe, in the organic electroluminescent display device of Bernkopf-Nishi in order to provide a stable light emitting characteristics by enlarging the region contributing to the light emitting, thereby guaranteeing a larger aperture rate.

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With respect to Claim 27, Bernkopf-Nishi-Urabe teaches that the second spacer (112 of '673) contacts the barrier part (#6 of '174).

***Response to Arguments***

Applicant's arguments filed on 5/8/06 have been fully considered but they are not persuasive.

A. In response to Applicant's arguments that Bernkopf (US 6844673 B1) fails to teach a second spacer, the Examiner respectfully disagrees.

That there is contact between the top surfaces of each of the front plane and the back plane is irrelevant as Examiner interprets the claimed "spacer" as any element that maintains the proper functionality. Since no subsequent restriction on the form of the spacer has been established, it is reasonable to interpret the claimed "spacer" as an entity of which a physical element is utilized to create separation between two objects, clearly not necessitating the requirement of empty space surrounding the physical element. Examiner suggests applicant describe the "spacer" in terms such that a limiting physical attribute is set forth, the limiting physical attribute acting to mandate that the spacer have some external empty space enclosure thereof. Accordingly, the second spacer is disclosed by Bernkopf's teaching, which falls within applicant's claimed invention.

B. In response to Applicant's arguments that Bernkopf (US 6844673 B1) in view of Nishi et al (US 2001/0004190 A1) provides no suggestion or motivation to combine, the Examiner respectfully disagrees.

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Nishi teaches a spacer (sealing agent, 1005 see at least Fig. 11B) made of an adhesive material ([0160]) in order to ensure structural stability and prevention of external air ([0160]). It should be noted that Nishi's sealing agent, 1005, is a spacer in that it provides for a form of spacing between a first and second substrates. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the composition of the second spacer, as disclosed by Nishi, in the device of Bernkopf, in order to ensure structural stability and prevention of external air. Furthermore, that Bernkopf already teaches a first spacer with adhesive qualities does not negate the possibility of a second spacer with further adhesive qualities. Accordingly, the second spacer is disclosed by Bernkopf's teaching, which falls within applicant's claimed invention.

For the reasons stated above, the rejection of the claims is deemed proper.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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***Contact Information***

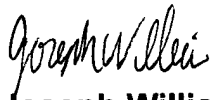
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana Sanei whose telephone number is (571) 272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hana A. Sanei  
Examiner



  
**Joseph Williams**  
**Primary Examiner**